

present site of Melbourne. The sandy beds, of considerable depth, hold water like a sponge, and afford suitable soil, under a fair rainfall, for a thick growth of trees and scrub. Such a growth, in the memory of many of our members, occupied most of the country to the east of the Yarra. To the westward the lava plains are covered with a thin coat of soil, rich in plant food, but with a subsoil of dense bluestone, which neither holds water nor allows of drainage. It is a country rich in grass, but devoid of trees and scrub. The fauna depends on the flora for its existence, and rarely do we find so close together two such extensive and distinct classes of country as we do on the two sides of Melbourne. The differences in the plants and animals of the two areas are known, at any rate in part, to all. The tendency in the past has been to study the richer life of the eastern area, and to somewhat neglect the western.

In the far past, when conditions were similar on both sides of Melbourne, the same life—both plant and animal—was to be found at Sydenham and at Caulfield. Now the greatest contrast exists in every way, and we can see even from this sketch how far-reaching are the effects of geological changes. Not alone is this seen in the distribution of plant and animal, but we trace it in the scenery and in the growth of Melbourne's suburbs, for we prefer to build our houses on the sand, and not to found them on the rock.

In conclusion, I would like to suggest that an attempt should be made to compare critically the flora and fauna of the two classes of country that are here dealt with. We want comparisons of what lives on the basalt with what lives on the sands. But to do this properly we must keep out of those valleys which trench to the underlying rocks, and confine our attention strictly to the dwellers on the two geological formations. This is a problem which may be studied in many parts of Victoria, but here we can do it at our doors.—T. S. HALL.

## DESCRIPTIONS OF SOME NEW VICTORIAN COCCIDÆ.

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ASPIDIOTUS (HEMIBERLESIA) IMMACULATUS, n. sp. (fig. 1).

*Female*.—Puparium snowy-white; the pellicles completely concealed—both above and below—by the white secretory covering, but indicated by the presence of a raised disc above the first larval skin. Form strongly convex; the apex tilted over towards the anterior extremity. Diameter, 1.25 to 1.50 mm.

*Male*.—Puparium similar to that of female, but narrower. Long, 1 mm. ; broad, 0.50 mm.

Adult female broadly pyriform. Pygidium bluntly pointed. Pygidial lobes small and confused, almost concealed above by a chitinous outgrowth of the margin ; median pair ligulate, with truncate or slightly rounded extremity, separated by a space of about their own width ; first lateral lobes broader than median, closely followed by a stout marginal prominence simulating the outer lobule often present in species of *Mytilaspis* and *Chionaspis* ; second lateral lobes represented by a blunt marginal prominence, beyond which the margin is somewhat serrate. Squames—between the lobes—rather densely chitinous. No circumgenital glands. Dorsal pores rather small and inconspicuous, in the usual linear series. Anal aperture moderately large, distant from margin by about three times its greater diameter. Long, 1.05 mm. ; broad, about 1 mm.

*Habitat*.—Shepparton, Victoria, Australia. On *Styphelia virgata*. (Coll. C. French, No. 18.)

(The above description has been drawn up from old and densely chitinous examples. It is probable that—in early adult examples—the pygidial lobes and squames would be more prominent and conspicuous.)

ASPIDIOTUS (TAGIONIA) SUBFERVENS, n. sp. (fig. 2).

*Female*.—Puparium circular, strongly convex. Dull blackish brown, thickly dusted with greyish scurfy secretion. Pellicles fulvous, more or less obscured above by grey secretion. Below deep chocolate-brown ; pellicles fiery red. Diameter averaging 1.25 mm.

*Male*.—Puparium not observed.

Adult female almost circular. Pygidium rather acutely pointed. Median pygidial lobes large, prominent, convergent ; apex rounded, outer edge steeply sloped and notched in the middle. Lateral lobes represented only by small marginal prominences. Two pairs of large, stout claviform paraphyses on each side. No pectinate squames. Marginal spines moderately large. Anal orifice distant from margin by about  $2\frac{1}{2}$  times its greater diameter. No circumgenital glands. Dorsal pores few and inconspicuous. Long, 1 to 1.10 mm.

*Habitat*.—Victoria, Australia. On *Acacia*, sp. (Coll. C. French, No. 24B). Received also from Mr. J. Lidgett, on *Pomaderris*, sp. (Coll. J. Lidgett, No. 60.)

The pygidial characters are very similar to those of *A. perniciosus* ; but differ in the absence of pectinate squames, and in the relatively larger size of the paraphyses. The puparium of *subfervens* differs from that of *perniciosus* in its greater convexity, stouter texture, and colour of pellicles.

CHIONASPIS ANGUSTA, n. sp. (fig. 3).

*Female*.—Puparium elongate, narrow, somewhat resembling (in form) that of *Mytilaspis gloveri*. Colour white, more or less completely covered (in example under observation) by a reddish-brown superficial layer of inorganic matter that also covers the leaves of the plant. In other situations the puparia would probably be snowy-white. Pellicles fulvous. Long, 2 to 3 mm.; broad, about 0.75 mm.

*Male*.—Puparium snowy-white; feebly tricarinate. Pellicle orange-yellow. Long, 1.25 mm.

Adult female narrow in front, with straight sides, broadening to abdominal segments. Pygidium broadly rounded. Median lobes broad; not very prominent; united at base, widely divergent at extremity; slightly constricted in the middle; extremity truncate, smooth or feebly crenulate. First lateral lobes duplex, small; inner lobule largest, conical. Second lateral lobes obsolete. Singular spiniform squames at usual intervals. Spines inconspicuous. Anal orifice near base of pygidium. Circumgenital glands in five groups; median group 4 to 5, upper laterals 11 to 13, lower laterals 15 to 17. Dorsal pores large and conspicuous. Long, 1 mm.; greatest breadth, 0.40 mm.

*Habitat*.—Frankston, Victoria, Australia. On *Leptospermum laevigatum*. (Coll. C. French, jun., No. 33.)

CTENOCHITON SERRATUS, n. sp. (figs. 4-7).

Test of adult female oval. White or pale straw colour. Dorsum covered with polygonal glassy plates arranged symmetrically, in two series, on each side of a median line; a single elongate medial plate at anterior extremity; a marginal fringe of lanceolate plates, about 12 on each side. Long, 3.50 mm.

Test of male similar, but smaller and proportionately narrower. Hinder third occupied by a subcircular operculum, through which the adult insect makes its escape. Long, 2 mm.

Adult female with well-developed limbs. Antenna 6-jointed, 3rd longest, 3 and 4 sometimes confluent, occasionally an incomplete division in 6th. Plates of anal operculum triangular; outer edge a little longer than base, with a stout spine near apex; inner edge irregularly excised. Margin of body with a close series of short, stout conical-pointed spines. Stigmatic spines not noticeably larger than the others. Examples under observation not in sufficiently good preservation to permit of accurate measurement, but the length would be presumably a little less than that of the test.

*Habitat*.—Warrnambool, Victoria, Australia. On *Styphelia*, sp. (Coll. C. French, No. 34.)

Most nearly resembling *C. perforatus*, Mask., but more oval and differing from this (and apparently from all other described species) in the absence of a median dorsal series of plates on the test.

*ERIOCOCCUS SORDIDUS*, n. sp. (figs. 8, 9).

Sac of adult female oblong oval. Colour and texture difficult to determine, every example being thickly encrusted with black fumagine fungus, as is also the surrounding surface of the bark. The inner coating of the sac is white. Long, about 3 mm.; broad, 1.50 mm.

Sac of male snowy-white, conspicuous against the dead black surroundings. Long, 1.50 mm.

Adult female oval. A marginal series of rather slender-pointed spines, broken into sets of three on the abdominal segments. A median dorsal series of paired spines—a single pair on each abdominal segment. A smaller spine on each segment about half-way between the median and marginal series. Both dorsal and ventral surfaces with small scattered spinnerets and fine hairs. Antenna moderately large and stout, 7-jointed; 2nd, 3rd, 4th, and 7th subequal, longest (3rd sometimes longer than the others); 5th and 6th subequal, shortest. Anal tubercles prominent, stout; terminal seta not twice length of tubercle; a longish stout-pointed spine at base on inner side; a slender spine at base on outer side; and two slender spines near apex—on ventral and dorsal surfaces respectively. Anal ring with 8 stout hairs, extending beyond the middle of the tubercles. Long, 1.25 to 1.75 mm.; broad, 0.60 to 1 mm.

*Habitat*.—Dandenong Ranges, Victoria, Australia. On *Helichrysum ferrugineum*. (Coll. G. French, jun., No. 25.)

Said to be “a very destructive pest.”

Differs from *danthoniæ*, Mask., in broader form, shorter marginal spines, and presence of median dorsal series. Near *leptospermi*, Mask., but differing in the single marginal fringe and 7-jointed antennæ.

The accompanying catalogue of Australasian species of *Eriococcus*, showing the principal characters in parallel columns may be of assistance in discriminating between the closely similar forms. The characters are extracted from the published descriptions.

#### DESCRIPTION OF FIGURES.

- 1.—*Aspidiotus immaculata*, extremity of pygidium, ventral aspect.
- 2.—*Aspidiotus subfervens*, extremity of pygidium, dorsal aspect.
- 3.—*Chionaspus angusta*, extremity of pygidium, ventral aspect.
- 4.—*Ctenochiton serratus*, test of adult female, dorsal aspect.
- 5.—Do. test of male, dorsal aspect.
- 6.—Do. antenna of adult female.
- 7.—Do. marginal fringe of adult female.

